Appendix A: Marked-up Claims Denoting Amendment

1. (Amended)   In a wireless local loop subscriber unit, a method facilitating a telephone

2   call comprising:

3   determining whether a communication channel is available at a servicing communication

4   station to accommodate the telephone call;

5   providing a telephone interface with an indication denoting the unavailability of a

6   communication channel if it is determined that the communication station does not have a

7   communication channel available; [and]

8   enabling receipt of one or more digits of a telephone number from the telephone interface

9   even if no communication channels are available and comparing each of the received digits, as

10   received, against corresponding digits of one or more emergency codes to determine whether a

11   priority channel request is required to facilitate an emergency telephone call, and disabling the

12   receipt of further digits if it is determined that a received digit is not associated with an

13   emergency code.

1   36. Please cancel without prejudice.

1   37. (Amended)   A method according to claim 36, further comprising,

2   issuing [a] the priority channel request to the servicing communication station if the

3   result of the comparison reveals that the received digits correspond to an emergency code and no

4   other communication channels are otherwise available.

1   38.   A method according to claim 37, wherein the priority channel request denotes a priority

2   class of service that is greater than that of non-emergency telephone calls, such that the servicing

3   communication station reallocates communication channel parameters to facilitate the priority

4   channel request.

1   39. (Amended)   A method according to claim 38, wherein reallocation of communication

2   channel parameters include one or more of tearing down a lower priority communication channel

3   to facilitate the priority channel request, reallocation of bandwidth of one or more

4   communication channels to provide bandwidth to the priority channel request, modifying a

5   spatial [domain] division multiple access (SDMA) reuse pattern to provide bandwidth for the

6   priority channel request, and the like.

1   40. (Amended)   A method according to claim 35, wherein determining whether a

2   communication channel is available comprises:

3   receiving an off-hook detection signal at the transceiver;

4   issuing a channel request from the [transceiver] subscriber unit to the servicing

5   communication station; and

6   receiving a response at the [transceiver] subscriber unit from the communication station

7   to the channel request denoting whether a communication channel is available.

1   41.   A method according to claim 35, wherein the indication that all communication channels

2   are currently unavailable includes one or more of a fast busy signal, a null signal (silence), a

3   monotone signal, and/or any signal other than a dial tone.

1 42. A method according to claim 35, further comprising:

2 issuing a priority channel request to the servicing communication station if the subscriber

3 unit receives digits from the telephone interface denoting one or more emergency codes

4 associated with one or more emergency services.

1 43. A method according to claim 42, further comprising:

2 facilitating the emergency telephone call over a communication channel made available

3 by the communication station through call completion.

1 44. A method according to claim 35, further comprising:

2 converting dual-tone, multiple frequency (DTMF) tones received from the telephone

3 interface representing the telephone number entered by the user to digital signal(s) for the

4 transceiver.

1 45. A method according to claim 44, wherein said conversion is performed even if the

2 subscriber unit receives an indication from the servicing communication station that all

3 communication channels are currently unavailable.

1 46. A method according to claim 35, wherein the emergency codes are one or more of a

2 telephone number, a speed-dial code and/or a shortened emergency services code.

1   47.   An article of manufacture comprising a machine accessible storage medium to provide

2   machine executable instructions which, when executed, cause a machine to implement a method

3   according to claim 35.

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1   48. (Amended)   A wireless local loop subscriber unit comprising:

2   a telephone interface, to enable a user to enter a telephone number to place a telephone

3   call; and

4   a transceiver, coupled to the telephone interface, to accept entry of a telephone number

5   entered by the user even after determining that no communication channels are currently

6   available from a servicing communication station, [and] to compare each digit of the telephone

7   number as received against a corresponding digit of one or more emergency codes to determine

8   whether to issue a priority channel request to the communication station for a communication

9   channel if the telephone number received from the telephone interface corresponds to one or

10   more emergency services, and to disable receipt of additional digits of a telephone number if it is

11   determined that a received digit is not associated with an emergency code.

1   49.   A wireless local loop subscriber unit according to claim 48, further comprising:

2   an off-hook signal generator, responsive to the telephone interface, to generate an off-

3   hook signal to prompt the transceiver to request a communication channel from the

4   communication station when the user lifts a handset of the telephone interface to place a call.

1   50.   A wireless local loop subscriber unit according to claim 49, wherein the transceiver

2   responds to the off-hook signal by requesting a communication channel and providing the

3   telephone interface with an indication denoting whether a communication channel is available

4   from the communication station.

1   51.   A wireless local loop subscriber unit according to claim 50, wherein the transceiver

2   provides one or more of a fast busy signal, a constant monotone signal, and/or any tone other

3   than a dial tone as an indication to the user via the telephone interface that no communication

4   channels are currently available to facilitate a telephone call.

1   52.   A wireless local loop subscriber unit according to claim 48, further comprising:

2   a dual-tone, multiple frequency (DTMF) converter to convert DTMF signals generated by

3   the telephone interface representing the telephone number entered by the user in to digital signals

4   appropriate for input to the transceiver.

1   53. (Amended)   A wireless local loop subscriber unit according to claim 52, wherein the

2   DTMF converter remains enabled to receive and convert DTMF signals for the transceiver even

3   if the transceiver determines that no communication channels are currently available <u>until it is</u>

4   <u>determined that a received digit does not correspond to an emergency services code</u>.

1   54.   A wireless local loop subscriber unit according to claim 53, wherein the transceiver

2   receives and decodes the digital signals to determine whether the user is dialing an emergency

3   number, even if there are no communication channels available to support the call.

1   55.   A wireless local loop subscriber unit according to claim 54, further comprising:

2   a memory device, to store one or more codes associated with an associated one or more

3 emergency services, wherein the transceiver compares received digital signals associated with a

4 user-entered telephone number against the stored one or more codes to determine whether the

5 user is telephone number is associated with the one or more emergency services.

1 56. (Amended)   A wireless local loop subscriber unit according to claim 55, wherein the

2 transceiver compares the digital signals associated with the user-entered telephone number on a

3 digit-by-digit basis concurrently with receipt of the digits against corresponding digits of the one

4 or more stored emergency codes [on a digit-by-digit basis as the telephone number is entered],

5 and disables receipt of further digits if the comparison reveals that a received digit does not

6 conform to a corresponding digit of an emergency code(s).

1 57. (Amended)   A wireless local loop subscriber unit according to claim 48, the transceiver

2 comprising:

3   a memory, to receive and retain one or more codes associated with [an associated] one or

4 more emergency services; and

5   a processor, coupled to the memory, to receive digital signals representative of the dialed

6 telephone number and compare the received signals to the one or more codes stored in memory

7 to detect telephone calls to the one or more emergency services.

1 58.   A wireless local loop subscriber unit according to claim 48, further comprising:

2   an on-/off-hook detector, coupled between the telephone device and the transceiver, to

3   provide an off-hook indication to the transceiver when the user lifts a handset of the telephone

4   interface.

1   59. (Amended)   A wireless [local loop] communication system comprising:

2   a communication station, to communicatively couple [the] one or more wireless local

3   loop subscriber unit(s) to a wireline telephony network; and

4   a wireless [local loop] subscriber unit, communicatively coupled to the communication

5   station, to accept entry of a telephone number by a user via a telephone interface even after

6   determining that no communication channels are currently available between the subscriber <u>unit</u>

7   and the communication station <u>as long as entered digits conform to corresponding digits of one</u>

8   <u>or more emergency code(s) associated with one or more emergency services</u>, and to [determine

9   whether the telephone number entered corresponds to one or more emergency services

10   necessitating] <u>issue</u> a priority channel request for a communication channel if no communication

11   channels are otherwise available <u>to service a telephone call to an emergency service</u>.

1   60. (Amended)   A wireless [local loop] system according to claim 59, the wireless [local

2   loop] subscriber unit comprising:

3   a transceiver, coupled to the telephone interface, to accept the telephone number entered

4   by the user even after determining that no communication channels are currently available, and

5   to issue a priority channel request for a communication channel if the telephone number entered

6   corresponds to one or more stored emergency codes associated with a commensurate one or

7   more emergency services.

1 61. (Amended)   A wireless [local loop] system according to claim 60, wherein the

2 transceiver issues one or more priority channel request(s) to the communication station to obtain

3 a communication channel if no communication channels are otherwise available upon detecting

4 entry by the user of a code associated with an emergency service.

1 62. (Amended)   A wireless [local loop] system according to claim 60, wherein the stored

2 codes include one or more of a standard telephone number associated with a single emergency

3 service, a speed dial code, and/or a shortened telephone number to an agency serving multiple

4 emergency services.

1 63. (Amended)   A wireless [local loop] system according to claim 62, the subscriber unit

2 further comprising:

3   a memory device, coupled to the transceiver, to receive and retain one or more

4 emergency codes.

1 64. (Amended)   A wireless [local loop] system according to claim 59, the communication

2 station comprising:

3   a transceiver, to receive priority channel requests from one or more subscriber units and

4 modify one or more communication channel parameters to accommodate a priority channel

5 request when no communication channels are otherwise available.

1 65. (Amended)   A wireless [local loop] system according to claim 64, wherein the

2 modification of one or more communication channel parameters includes one or more of tearing

3   down an existing call to free the communication channel to accommodate the priority channel

4   request, lowering bandwidth associated with one or more communication channels to free

5   bandwidth for an additional communication channel to accommodate the priority channel

6   request, and/or modifying one or more spatial [domain] <u>division</u>, multiple access (SDMA) reuse

7   parameters to obtain a communication channel to accommodate the priority channel request.

1   66. (Amended)   An article of manufacture comprising:

2   a machine accessible medium to provide instructions which, when executed by a wireless

3   local loop subscriber unit, cause the subscriber unit to determine whether a communication

4   channel is available at a servicing communication station to accommodate a telephone call upon

5   detecting an off-hook signal from a telephone interface, provide the telephone interface with an

6   indication denoting the unavailability of a communication channel if it is determined that the

7   communication station does not have a communication channel available, [and] <u>to</u> enable receipt

8   of one or more digits of a telephone number from the telephone interface even if no

9   communication channels are available to <u>compare each of digit of the telephone number, as</u>

10   <u>received, against corresponding digit(s) of one or more emergency codes associated with one or</u>

11   <u>more emergency telephone numbers and</u> determine whether a priority channel request is required

12   to facilitate an emergency telephone call.

1   67. (Amended)   An article of manufacture according to claim 66, further comprising

2   instructions which, when executed, cause a wireless local loop subscriber unit to compare each

3   <u>digit of the received telephone number</u> [of the received digits], as received, against one or more

4   emergency codes maintained in the subscriber unit to determine whether the received digits

5   correspond to one or more emergency services associated with the one or more emergency

6   codes.

1   68.   An article of manufacture according to claim 66, further comprising instructions which,

2   when executed, cause the wireless local loop subscriber unit to issue a priority channel request

3   upon detecting entry of an emergency code even if no communication channels are currently

4   available.

1   69.   An article of manufacture according to claim 68, wherein the priority channel request

2   denotes a priority class of service that is greater than that of non-emergency telephone calls, such

3   that the servicing communication station reallocates communication channel parameters to

4   facilitate the priority channel request.

1   70.   An article of manufacture according to claim 66, further comprising instructions which,

2   when executed, cause a wireless local loop subscriber unit to facilitate an emergency telephone

3   call through completion via a communication channel made available by the communication

4   station in response to the subscriber units priority channel request.

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1   71. (Amended)   An article of manufacture according to claim 66, further comprising

2   instructions which, when executed, cause a wireless local loop subscriber unit to convert dual-

3   tone, multiple frequency (DTMF) tones received from the telephone interface representing the

4   telephone number entered by the user to digital signal(s), wherein said conversion is performed

5   even if the subscriber unit receives an indication from the servicing communication station that

6   all communication channels are currently unavailable <u>until a digit is received that does not</u>

7   <u>correspond to one or more emergency service code(s)</u>.

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2   *(50)* under Petition

3   72. (New)   A wireless communication system according to claim 59, wherein the wireless

4   communication system is a wireless local loop (WLL) communication system, and the subscriber

5   unit is a WLL subscriber unit.

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1   73. (New)   A method according to claim 35, wherein the priority channel is a reduced rate

2   ·communication channel reserved to facilitate emergency telephone calls.

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1   74. (New)   A method according to claim 35, wherein the priority channel is dynamically

2   created by a communication station by invoking spatial division multiple access (SDMA)

3   processing to effectively parse multiple communication channels including the priority channel

4   from a single physical channel to facilitate the emergency telephone call.

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1   75. (New)   A subscriber unit according to claim 48, wherein the priority channel is a reduced

2   rate communication channel reserved for emergency telephone call, and wherein the transceiver

3   includes reduced rate communication facilities.

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1   76. (New)   A subscriber unit according to claim 48, wherein the priority channel is a spatial

2   division multiple access (SDMA) enabled channel to facilitate an emergency telephone call.

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1   77. (New)   A wireless communication system according to claim 59, wherein the

2   communication station further comprises:

3   spatial division multiple access (SDMA) processing facilities, responsive to the

4   transceiver, to dynamically select a traditional communication channel and parse it into multiple

5   SDMA channels employing adaptive antenna technology, wherein the transceiver places the

6   emergency call on one or more of the SDMA channels to facilitate the emergency telephone call.

7

1   *New Ref*

1   78. (New)   A wireless communication system according to claim 59, the communication

2   station further comprising:

3   reduced rate communication channels, reserved and dynamically assigned by the

4   transceiver to facilitate emergency telephone calls.

5

1   *59*

1   79. (New)   A wireless subscriber unit comprising:

2   a telephone interface, to enable a user to enter a telephone number to place a telephone

3   call; and

4 a transceiver, coupled to the telephone interface, to accept entry of a telephone number

5 entered by the user even after determining that no communication channels are currently

6 available from a servicing communication station, to compare each digit of the telephone number

7 as received against a corresponding digit of one or more emergency codes to determine whether

8 to issue a priority channel request to the communication station for a communication channel if

9 the telephone number received from the telephone interface corresponds to one or more

10 emergency services, and to disable receipt of additional digits of a telephone number if it is

11 determined that a received digit is not associated with an emergency code.

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1 80. (New) A subscriber unit according to claim 79, further comprising:

2 an off-hook signal generator, responsive to the telephone interface, to generate an off-

3 hook signal to prompt the transceiver to request a communication channel from the

4 communication station when the user lifts a handset of the telephone interface to place a call.

1 81. (New) A subscriber unit according to claim 80, wherein the transceiver responds to the

2 off-hook signal by requesting a communication channel and providing the telephone interface

3 with an indication denoting whether a communication channel is available from the

4 communication station.

1 82. (New) A subscriber unit according to claim 81, wherein the transceiver provides one or

2 more of a fast busy signal, a constant monotone signal, and/or any tone other than a dial tone as

3   an indication to the user via the telephone interface that no communication channels are currently

4   available to facilitate a telephone call.

1   83. (New)   A subscriber unit according to claim 79, further comprising:

2   a dual-tone, multiple frequency (DTMF) converter to convert DTMF signals generated by

3   the telephone interface representing the telephone number entered by the user in to digital signals

4   appropriate for input to the transceiver.

1   84. (Amended)   A subscriber unit according to claim 83, wherein the DTMF converter

2   remains enabled to receive and convert DTMF signals for the transceiver even if the transceiver

3   determines that no communication channels are currently available until it is determined that a

4   received digit does not correspond to an emergency services code.

1   85. (New)   A subscriber unit according to claim 84, wherein the transceiver receives and

2   decodes the digital signals to determine whether the user is dialing an emergency number, even if

3   there are no communication channels available to support the call.

1   86. (New)   A subscriber unit according to claim 85, further comprising:

2   a memory device, to store one or more codes associated with an associated one or more

3   emergency services, wherein the transceiver compares received digital signals associated with a

4   user-entered telephone number against the stored one or more codes to determine whether the

5   user is telephone number is associated with the one or more emergency services.

1   87. (New)   A subscriber unit according to claim 86, wherein the transceiver compares the

2   digital signals associated with the user-entered telephone number on a digit-by-digit basis

3   concurrently with receipt of the digits against corresponding digits of the one or more stored

4   emergency codes, and disables receipt of further digits if the comparison reveals that a received

5   digit does not conform to a corresponding digit of an emergency code(s).

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1   88. (New)   A subscriber unit according to claim 79, the transceiver comprising:

2   a memory, to receive and retain one or more codes associated with one or more

3   emergency services; and

4   a processor, coupled to the memory, to receive digital signals representative of the dialed

5   telephone number and compare the received signals to the one or more codes stored in memory

6   to detect telephone calls to the one or more emergency services.

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1   89. (New)   A subscriber unit according to claim 79, wherein the priority channel is a reduced

2   rate communication channel reserved for emergency telephone call, and wherein the transceiver

3   includes reduced rate communication facilities.

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1   90. (New)   A subscriber unit according to claim 79, wherein the priority channel is a spatial

2   division multiple access (SDMA) enabled channel to facilitate an emergency telephone call.

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1   91. (New)   A method comprising:

2   receiving a priority channel request at a communication station from a wireless subscriber

3   unit, the priority channel request denoting an emergency telephone call; and

4   establishing the emergency telephone call using a reduced rate communication channel

5   reserved for emergency telephone calls when traditional communication channels are otherwise

6   unavailable.

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1   92. (New)   A method according to claim 91, the method further comprising:

2   receiving a request for a communication channel from a wireless subscriber unit;

3   providing the subscriber unit with an indication that no communication channels are

4   available; and

5   enabling receipt of a priority channel request if one or more reduced rate, reserve

6   channels are available to facilitate an emergency telephone call from the subscriber unit.

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1   93. (New)   A method according to claim 91, the method further comprising:

2   determining whether a reserved, reduced rate communication channel is available to

3   facilitate the emergency telephone call upon receipt of a priority channel request; and

4   establishing the emergency telephone call on the reserved, reduce rate communication

5   channel to facilitate communication services through call completion if the reserved, reduce rate

6   communication channel is available.

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1   94. (New)   A method according to claim 93, the method further comprising:

2   invoking spatial division multiple access (SDMA) processing to free communication

3   channel resources to handle the emergency telephone call if a reserved, reduced rate

4   communication channel is not available.

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1   95. (New)   A method according to claim 93, wherein the priority channel request denotes a

2   priority class of service that is greater than that of non-emergency telephone calls, such that the

3   servicing communication station reallocates communication channel parameters to facilitate the

4   priority channel request in the absence of available communication channels or reserved, reduced

5   rate communication channels.

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1   96. (New)   A method according to claim 95, the method further comprising:

2   identifying an established communication session with a lower priority than the priority

3   channel request; and

4   tearing down the established communication session to free a communication channel to

5   facilitate the priority channel request if a reserved, reduced rate communication channel is not

6   available.

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1   97. (New)   A communication station comprising:

2   a plurality of wireless communication channels including full-rate communication

3   channels and reserved, reduced-rate communication channels; and

4   control logic, responsive to call requests received from subscriber units in a coverage area

5   of the communication station, to select either a wireless communication channel or a reserved,

6   reduced rate communication channel to facilitate a communication session, wherein the control

7 logic selectively employs a reserved, reduced rate communication channel to facilitate a

8 telephone call associated with a priority channel request when no other communication channels

9 are available.

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1 98. (New)   A communication station according to claim 97, wherein the priority channel

2 request denotes an emergency telephone call.

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1 99. (New)   A communication station according to claim 97, wherein the communication

2 channels are established between the communication station and the subscriber unit(s) using

3 transceiver(s), wherein at least subset of the transceivers include processing features to facilitate

4 the reserved, reduced rate communication channel(s).

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1 100. (New)   A communication station according to claim 97, wherein the control logic

2 employs spatial division multiple access (SDMA) processing techniques to free communication

3 channel resources when neither a communication channel nor a reserved, reduced rate

4 communication channel are otherwise available.

1 101. (New)   A method comprising:

2   receiving a priority channel request from a wireless subscriber unit; and

3   adjusting a spatial division multiple access (SDMA) channel reuse pattern of a wireless

4 communication station to free communication resources to facilitate a telephone call associated

5 with the priority channel request when other communication channels are not available.

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1   102. (New)   A method according to claim 101, wherein the priority channel request denotes an

2   emergency telephone call.

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1   103. (New)   A method according to claim 101, wherein the SDMA processing features utilize

2   adaptive antenna technology to improve channel reuse capability to facilitate multiple

3   communication sessions using a single physical communication channel.

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1   104. (New)   A method according to claim 103, wherein SDMA processing features facilitate

2   two (2) disparate communication sessions over a single communication channel.

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1   105. (New)   A method according to claim 103, wherein one of the multiple communication

2   sessions established on the SDMA channel is an emergency telephone call associated with the

3   received priority channel request.

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1   106. (New)   A communication station comprising:

2   two or more antennae to support wireless communication channels dynamically

3   established between the communication station and one or more subscriber unit(s) in a coverage

4   area supported by the communication station; and

5   control logic, coupled to the antennae, to control one or more aspects of wireless

6   communication with the subscriber unit(s) including a spatial division multiple access (SDMA)

7   reuse pattern employed by the communication station, wherein the control logic adjusts the

8   SDMA reuse pattern to free a communication channel when a communication channel is

9   otherwise unavailable in response to a priority channel request from a subscriber unit.

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1   107. (New)   A communication station according to claim 106, wherein the priority channel

2   request denotes a request for an emergency telephone call.

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1   108. (New)   A communication station according to claim 107, wherein the control logic

2   facilitates the emergency telephone call associated with the priority channel request using newly

3   created communication resources associated with the new SDMA reuse pattern.

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1   109. (New)   A communication station according to claim 107, wherein the control logic

2   adjusting the SDMA reuse pattern facilitates two communication sessions using a single wireless

3   communication channel, wherein one of the communication sessions is the emergency telephone

4   call associated with the priority channel request.